

1   **What Is claimed is:**

2  
3   1. Network management system

4       comprising a network management master-agent process  
5       having  
6           a first interface being adapted to communicate with  
7           a network management software module using a  
8           network management protocol format;  
9           a second interface being adapted to communicate  
10          with a plurality of network management sub-agent  
11          processes using an object-oriented interface  
12          description language format;  
13       the network management master-agent process further  
14       comprising a converting unit for converting  
15          a message according to the network management  
16          protocol format into the object-oriented interface  
17          description language format;  
18          a message according to the object-oriented  
19          interface description language format into the  
20          network management protocol format.

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22   2. Network management system according to claim 1, further  
23   comprising a network management software module coupled to  
24   the network management master-agent process via the first  
25   interface.

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27   3. Network management system according to claim 2, wherein  
28   the network management software module comprises a graphical  
29   user interface for presenting network management information  
30   to a user.

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32   4. Network management system according to claim 1, wherein  
33   the network management protocol is the Simple Network  
34   Management Protocol or the Simple Network Management Protocol  
35   Version 2.

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1 5. Network management system according to claim 1, wherein  
2 the object-oriented interface description language is the  
3 Common Object Request Broker Architecture.

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5 6. Network management system according to claim 1, further  
6 comprising a plurality of network management sub-agent  
7 processes coupled to the network management master-agent  
8 process via the second interface.

9  
10 7. Network management system according to claim 6, further  
11 comprising one Management Information Base for each network  
12 management sub-agent process

13 wherein each Management Information Base is coupled to the  
14 network management sub-agent process;

15 wherein each Management Information Base is designed for  
16 specifying the structure of management information in  
17 terms of the objects to be managed (predefined  
18 variables) of an application to be monitored.

19  
20 8. Network management system according to claim 7, wherein at  
21 least one of the Management Information Bases is defined in  
22 the Abstract Syntax Notation code.

23  
24 9. Network management system according to claim 8, wherein at  
25 least one of the network management sub-agent processes  
26 comprises a further conversion unit for converting data of a  
27 Management Information Base specified by a user in Extensible  
28 Markup Language format into the Abstract Syntax Notation  
29 format.

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31 10. Network management system according to claim 9, wherein  
32 at least one of the network management agent processes is  
33 operated on a Hewlett-Packard UNIX operating system.

34  
35 11. Computer-based method for network management, comprising  
36 the following steps:

37 Receiving a request message in a network management

1        protocol format from a network management software  
2        module by a network management master-agent process;  
3        Converting the request message from the network management  
4        protocol format into an object-oriented interface  
5        description language format;  
6        Sending the converted request message in the object-  
7        oriented interface description language format to at  
8        least one network management sub-agent process.

9  
10    12. Computer-based method for network management according to  
11    claim 11, wherein the network management protocol is the  
12    Simple Network Management Protocol or the Simple Network  
13    Management Protocol Version 2.

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15    13. Computer-based method for network management according to  
16    claim 11, wherein the object-oriented interface description  
17    language is the Common Object Request Broker Architecture.

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19    14. Computer-based method for network management according to  
20    claim 11, comprising the further step of determining the sub-  
21    agent process from the plurality of sub-agent processes which  
22    is responsible for the request message, wherein the criterion  
23    for determining the responsible sub-agent process is an  
24    Object Identifier managed by the sub-agent process.

25  
26    15. Computer-based method for network management according to  
27    claim 14, comprising the further step that data of a  
28    Management Information Base specified by a user in Extensible  
29    Markup Language format is converted by a sub-agent process  
30    into the Abstract Syntax Notation format.

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32    16. Computer-based method for network management according to  
33    claim 11, wherein at least one of the network management  
34    agent processes is operated on a Hewlett-Packard UNIX  
35    operating system.

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- 1 17. Computer-based method for network management, comprising  
2 the following steps:  
3     Receiving a response message in an object-oriented  
4     interface description language format from a network  
5     management sub-agent process by a network management  
6     master-agent process;  
7     Converting the response message from the object-oriented  
8     interface description language format into a network  
9     management protocol format;  
10    Sending the converted response message in the network  
11    management protocol format to a network management  
12    software module.  
13
- 14 18. Computer-based method for network management according to  
15 claim 17, further comprising the following steps to be  
16 carried out before carrying out the steps of claim 17:  
17     Receiving the value of the Management Information Base  
18     variable from the user application after it processes  
19     the request;  
20     Sending the response message in the object-oriented  
21     interface description language format to the network  
22     management master-agent process.  
23
- 24 19. Computer-based method for network management according to  
25 claim 18, wherein the network management protocol is the  
26 Simple Network Management Protocol or the Simple Network  
27 Management Protocol Version 2.  
28
- 29 20. Computer-based method for network management according to  
30 claim 17, wherein the object-oriented interface description  
31 language is the Common Object Request Broker Architecture.  
32
- 33 21. Computer-based method for network management according to  
34 claim 18, wherein the Management Information Base is designed  
35 for specifying the structure of management information in  
36 terms of the objects to be managed (predefined variables) of  
37 an application to be monitored.

1 22. Computer-based method for network management according to  
2 claim 18, wherein the Management Information Base is defined  
3 in the Abstract Syntax Notation code.

4  
5 23. Computer-based method for network management according to  
6 claim 22, comprising the further step that data of a  
7 Management Information Base specified by a user in Extensible  
8 Markup Language format is converted by a sub-agent process  
9 into the Abstract Syntax Notation format, wherein the further  
10 step is carried out before carrying out the steps of claims  
11 18 and 17.

12  
13 24. Computer-based method for network management according to  
14 claim 17, wherein at least one of the network management  
15 agent processes is operated on a Hewlett-Packard UNIX  
16 operating system.  
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TOGETHER, STATEMENTS